

## The Tolerability of Risk

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In the traditional risk constellation literature, mixing theory and practice is not always a successful formula. In *The Tolerability of Risk*, the authors did reach a very good level of integration of both approaches even if the practical part is smaller.

Indeed, the theoretical part of the book consists of three chapters written by Ortwin Renn. The first one introduces the risk governance framework, which is the theoretical base of the book. This framework is characterised by two main innovations, which we will explain further. Broadly, instead of the classical chain of the risk identification, assessment, management and communication, Ortwin Renn suggests a risk framework with four main steps (Pre-Assessment, Risk Appraisal, Tolerability and Acceptability Judgement and Risk Management) and a central one (Communication).

The first innovation of this framework is to take into account the societal context at each step. For example, in the pre-assessment phase one will integrate stakeholders' views in order to avoid a filter effect for what is going to be qualified as a risk. Then, in the risk appraisal phase, one will consider, on one hand, risk from a scientific outview and on the other hand, questions raised by the stakeholders. In the tolerability and acceptability judgement phase, one will consider societal issues such as the choice of technology and societal needs. Lastly, in the management phase, one will involve the stakeholders in different ways depending on the strategy decided.

The second innovation is a new categorisation of risk-related knowledge. Ortwin Renn identifies four risk categories (simple, complex, uncertain and ambiguous) depending on the difficulty to establish the cause-effect relationship between a risk agent and its potential consequences. This categorisation provides the risk manager with particular guiding principles in order to design a specific risk management strategy.

This risk framework is then characterised by some very important principles of good governance such as transparency, effectiveness and efficiency, accountability, strategic focus, sustainability, equity and fairness, and respect of the law. But the foremost principle of this risk framework governance is participation, which is a central feature of the framework at any step.

The second chapter is dedicated to the risk handling chain. There, Ortwin Renn outlines that risks are mentally constructed and therefore, are not a real phenomenon. Nevertheless, risks can be considered as indicators of people's views on the world. When a society identifies some specific risks through specialised institutions, these risks are guided by cultural values. From this perspective, health and environmental agencies's study is particularly interesting to understand how a problem is framed as a risk issue.

Moreover, Ortwin Renn focuses on the details of the components of the risk governance framework. The most remarkable innovative point is related to the stakeholder's involvement and participation. This statement is also a very controversial one. Renn defines "stakeholders" in terms of socially organised groups that will affect a decision-making process, which in that case is about risk management. According to Renn, this involvement and participation process should be extended to other groups such as media cultural elites, *non-organised affected public* and *non-organised observing public*.

The involvement and participation dimension is analysed in terms of inclusive governance, which gives us some features about the decision-making process open to stakeholders. This participative approach can be adapted according to the four categories of risk at stake we mentioned above.

In the third theoretical chapter, Renn highlights the political realities characterising the risk governance framework. Beyond the theory, Renn invites us to be critical about assets, skills and capabilities of the institutional capacity to handle the risks.

Thus, according to Renn, when starting a risk assessment, we have to consider three main situations related to the state and quality of knowledge available on the risks. The former is called “complexity” and it refers to a certain degree of difficulty to identify and quantify cause-effect relationships between a tremendous amount of potential agents and the known effects. Besides this, one can find the “uncertainty” situation. This latter is about the fact that human knowledge will always be incomplete and selective. “Ambiguity” is the third situation, which is linked to the existence of contested views on the justification of a specific risk.

The practical part of this book is built on four experiences, all related to the Health and Safety Executive (HSE) and the Tolerability of Risk models (ToR). These experiences give the reader a clear historical understanding of HSE perspective on ToR. In addition, it also provides the reader with a particularly interesting regulator’s view on the flexibility and adaptability dimensions of the ToR framework as well as a concrete application of HSE’s approach to decision-making. Eventually, a case study on the institutional context in which ToR is implemented. This diversity of experiences is well documented and provides an interdisciplinary tool to analyse the concepts of tolerability of risk, ALARP (as low as reasonably practicable), decision-making and stakeholders’ participation.

*Tolerability of risk* should then be used by both scholars and practitioners willing to link theory and practice in order to put the question of the opening of the risk decision-making process under pressure.

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